

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Application No: 10/604,661  
Filing Date: August 7, 2003  
Applicant(s) Teran, Jr. et al.  
Confirmation No: 1660  
Group Art Unit: 2836  
Examiner: Daniel J. Cavallari  
Title: CONTROLLED VEHICLE SHUTDOWN SYSTEM  
Attorney Docket No: 81044283 (36190-773)  
Customer No: 28549

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Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

**APPEAL BRIEF**

This brief is submitted in support of the Notice of Appeal of the Final Rejection filed  
September 12, 2008.

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**I. Real Party in Interest**

The real party in interest in this matter is Ford Global Technologies, LLC, which is a wholly owned subsidiary of Ford Motor Company, both of Dearborn, Michigan (hereinafter “Ford”).

**II. Related Appeals and Interferences**

There are no other known appeals or interferences which will directly affect or be directly affected by or have bearing on the Board’s decision in the pending appeal.

**III. Status of the Claims**

Claims 1-3, 5, 7, 8 and 10-13 are pending in the application. Claims 4, 6, 9 and 14-22 have been canceled.

The rejection of Claims 1-3, 5, 7, 8 and 10-13 is being appealed.

**IV. Status of Amendments**

No amendments were filed following the Final Rejection.

**V. Summary of Claimed Subject Matter**

Claim 1 is the only independent claim in this case. Claim 1 is best understood with reference to Appellants’ Figures and Specification at Paragraph [0021], at lines 3-7, as well as at Paragraph [0022], at lines 9-11; Paragraph [0030], at lines 7-10; Paragraph [0032], at lines 1-6; Paragraph [0044], at lines 1-9; Paragraph [0045], at lines 1-7; and Paragraph [0046], at lines 1-7.

Independent Claim 1

According to Claim 1, a vehicle shutdown system for a non-hybrid vehicle having an internal combustion engine includes an ignition-enabling device, 14, 16, having at least an on state and an off state, with the ignition-enabling device 14, 16, enabling ignition of the internal combustion engine, 34. A switch, 14, is coupled to the ignition-enabling device and fuel supply system, 38, 40. A non-hybrid internal combustion engine controller, 18, has a number of

functions and is coupled to the ignition-enabling device 14,16, with engine controller 18 at least temporarily maintaining operation 108,110, of at least a portion of the controller functions when the ignition-enabling device is switched to the off state, 108, 110. The controller functions include non-idle air valve related functions. The controller also disables fuel system 108 upon the ignition-enabling device 14, 16 being switched to the off state.

## **VI. Grounds of Rejection to be Reviewed on Appeal**

1. Claim 1 stands rejected under 35 U.S.C. 112, second paragraph, as being indefinite.
2. Claims 1-3, 10 and 13 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Slopsema et al. (US 2002/0179031) and Malik (US 4,364,343).
3. Claims 5 and 7 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Slopsema et al. in view of Malik in further view of Page et al. (US 6,499,455).
4. Claim 8 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Slopsema et al. in view of Malik in further view of Hawkins (US 2004/0262995).
5. Claim 11 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Slopsema et al. in view of Malik in further view of Fukushima et al. (US 2003/0056753).
6. Claim 12 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Slopsema et al. in view of Malik in further view of Bakhholdin et al. (US 2002/0157881).

## **VII. Arguments**

### **1. Section 112 Rejection of Claim 1**

The Examiner asserts that Claim 1 is indefinite because the term “non-idle air valve related function” is not described in the specification. Appellants respectfully submit

however, that the meaning of this term is clear from the specification, drawings and claims of this case as originally filed. The term “non-idle air valve related function” merely refers to functions which are not concerned with control of air flowing into the engine at idle. Examples of non-idle air related functions are given in Claim 2 and include a camshaft position function, a crankshaft position function, a remote start function, and a drive-by-wire function. Accordingly, Appellants respectfully submit that the term “non-idle air valve related function” is clear and the Examiner’s rejection should be reversed.

The Examiner also states that the term “non-hybrid” and “internal combustion engine” used in Claim 1 were not provided in the specification or the original claims. Appellants respectfully submit that these terms were added as an attempt to clarify Claim 1. Nevertheless, Appellants would be satisfied if these terms were removed from Claim 1. At any rate, the Examiner has performed a lengthy examination of this case with the terms included, and Appellants submit that the likelihood of confusion is low, given the Examiner’s demonstrated facility with the meaning of the Claims.

## **2. Section 103 Rejection of Claims 1-3 and 10-13**

The Examiner argues that Slopsema teaches a vehicle shutdown system with an ignition-enabling device and an engine controller which “maintains at least a portion of the controller functions when the ignition enabling device is switched to the off state, the controller functions comprising a non-idle air valve related function.” Slopsema, it is true, controls air during engine shutdown, and Slopsema is controlling an idle-air valve related function. Stated another way, Slopsema is not controlling a non-idle air valve related function, which functions are further defined in Claim 2 as including camshaft

position function, remote start function, and drive-by-wire function, for the simple reason that Slopsema is using the engine's sole air throttle to control airflow through the engine. Stated another way, because there is only one throttle in Slopsema's system, it must, by definition, be an idle air control throttle, and Slopsema is therefore working with an idle air valve related function.

The Examiner admits that Slopsema fails to teach a switch for directing the controller to disable the fuel supply system when the ignition enabling device is switched off. For this, the Examiner incorporates Malik. The combination of Slopsema and Malik is the basis for the Examiner's rejection of the limitation in Claim 1 relating to fuel disablement. Appellants respectfully submit however, that neither Slopsema, nor Malik, whether taken singly, or in combination, either teach, suggest, infer, or disclose the claimed temporary maintenance of non-idle air valve controller functions when the ignition device is switched off. As a result, Claim 1 is allowable, as are Claims 2-3 and 10-13, which depend therefrom, and the Board is hereby requested to reverse the Examiner's rejection of Claims 1-3 and 10-13.

**3-6 Section 103 Rejection of Claims 5, 7, 8, 11 and 12**

Claims 5, 7, 8, 11, and 12 all stand rejected over Slopsema in view of Malik, and further in view of either Page, or Hawkins, or Fukushima, or Bakholdin. None of these added references contains disclosure sufficient to overcome the deficiencies noted in connection with the rejection of Claim 1. As a result, Appellants respectfully submit that each of Claims 5, 7, 8, 11, and 12, which all depend ultimately from Claim 1, are allowable, and the Board is hereby requested to reverse the Examiner's rejection of Claims 5, 7, 8, 11, and 12.

**VIII. Conclusion**

For the foregoing reasons, Appellants respectfully request that the Board direct the Examiner in charge of this examination to withdraw the rejections and to issue Claims 1-3, 5, 7, 8, and 10-13 remaining in this case.

Please charge any fees required in the filing of this appeal to deposit account 06-1510.

Date:

11/7/08

Respectfully submitted,



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**IX. Claims Appendix**

1. (Previously Presented) A vehicle shutdown system for a non-hybrid vehicle having an internal combustion engine comprising:
  - an ignition-enabling device having at least on ON state and an OFF state, said ignition-enabling device enabling ignition of the internal combustion engine;
  - a switch coupled to said ignition-enabling device and a fuel supply system; and
  - a non-hybrid internal combustion engine controller having a plurality of functions and being coupled to said ignition-enabling device, said engine controller at least temporarily maintaining operation of at least a portion of said controller functions when said ignition-enabling device is switched to said OFF state, said controller functions comprising non-idle air valve related functions, said engine controller also disabling said fuel supply system upon said ignition-enabling device being switched to said OFF state.
2. (Previously Presented) A system as in claim 1 wherein said plurality of functions are selected from at least one of a camshaft position function, a crankshaft position function, a remote start function, and a drive-by-wire function.
3. (Previously Presented) A system as in claim 1 further comprising a single throttle-controlled device, which is incorporated and adjustable to control air intake other than at idle, said engine controller electronically controlling said single throttle-controlled device and at least temporarily preventing shutdown of electronic throttle control when said ignition-enabling device is switched to an OFF state.
4. (Canceled)
5. (Original) A system as in claim 3 further comprising a switch coupled to said engine controller, said engine controller enabling said switch when said ignition-enabling device is in said ON state and at least temporarily preventing disablement of said switch when said ignition-enabling device is in said OFF state.
6. (Canceled)



7. (Previously Presented) A system as in claim 3 further comprising a throttle actuator position sensor generating a throttle position signal, said engine controller adjusting a position of said single throttle-controlled device in response to said throttle position signal.

8. (Original) A system as in claim 3 wherein said ignition-enabling device is an ignition start key assembly.

9. (Canceled)

10. (Previously Presented) A system as in claim 3 wherein said engine controller adjusts a position of said single throttle-controlled device to be more air flow restrictive, without closing off the flow of air, than that of said single throttle-controlled device in a default position when said ignition-enabling device is switched to said OFF state.

11. (Previously Presented) A system as in claim 3 wherein said engine controller adjusts a position of said single throttle-controlled device to be equal to or between 1-2° open relative to a closed position when said ignition-enabling device is switched to said OFF state.

12. (Original) A system as in claim 1 further comprising a safety monitor receiving an operation status signal from said engine controller when operation of said at least a portion of said controller functions is maintained and said ignition-enabling device is switched to said OFF state.

13. (Original) A system as in claim 1 wherein said engine controller is at least a portion of a drive-by-wire system controller.

14-22. (Canceled)

**X. Evidence Appendix**

None.

**XI. Related Proceedings Appendix**

None.